

L Number	Hits	Search Text	DB	Time stamp
-	7	"5823758"	USPAT; US-PGPUB	2004/04/17 09:56
-	4	"2596450"	USPAT; US-PGPUB	2004/04/17 10:03
-	1852	hydrotreat\$ same distillate	USPAT; US-PGPUB	2004/04/17 10:08
-	515	vapor same phase same inhibitor	USPAT; US-PGPUB	2004/04/17 10:09
-	1	(hydrotreat\$ same distillate) and (vapor same phase same inhibitor)	USPAT; US-PGPUB	2004/04/17 10:04
-	52	(hydrotreat\$ same distillate) and 44/\$.ccls.	USPAT; US-PGPUB	2004/04/17 10:04
-	3	hydrotreat\$ and (vapor same phase same inhibitor)	USPAT; US-PGPUB	2004/04/17 10:08
-	307	vapor with phase with inhibitor	USPAT; US-PGPUB	2004/04/17 10:09
-	1	(hydrotreat\$ same distillate) and (vapor with phase with inhibitor)	USPAT; US-PGPUB	2004/04/17 10:09
-	363	hydrotreat\$ same distillate	EPO; JPO; DERWENT	2004/04/17 10:10
-	355	vapor with phase with inhibit\$	EPO; JPO; DERWENT	2004/04/17 10:10
-	1	(hydrotreat\$ same distillate) and (vapor with phase with inhibit\$)	EPO; JPO; DERWENT	2004/04/17 10:10
-	1	hydrotreat\$ and (vapor with phase with inhibit\$)	EPO; JPO; DERWENT	2004/04/17 10:10
-	42	hydrotreat\$ and amine	EPO; JPO; DERWENT	2004/04/17 10:11
-	128579	surfactant	EPO; JPO; DERWENT	2004/04/17 10:11
-	3	(hydrotreat\$ and amine) and surfactant	EPO; JPO; DERWENT	2004/04/17 10:14
-	3	(hydrotreat\$ same distillate) and surfactant	EPO; JPO; DERWENT	2004/04/17 10:15
-	701	petroleum with amine	EPO; JPO; DERWENT	2004/04/17 10:15
-	1	(vapor with phase with inhibitor) and ((petroleum with amine) and 44/\$.ccls.)	USPAT; US-PGPUB	2004/04/17 10:16
-	132	(petroleum with amine) and 44/\$.ccls.	USPAT; US-PGPUB	2004/04/17 10:20
-	46	((petroleum with amine) and 44/\$.ccls.) and (surfactant or emulsifier or "surface active")	USPAT; US-PGPUB	2004/04/17 10:21

<u>NEWS 1</u>	Web Page URLs for STN Seminar Schedule - N. America	
<u>NEWS 2</u>	"Ask CAS" for self-help around the clock	
<u>NEWS 3</u>	JAN 27	Source of Registration (SR) information in REGISTRY updated and searchable
<u>NEWS 4</u>	JAN 27	A new search aid, the Company Name Thesaurus, available in CA/CAplus
<u>NEWS 5</u>	FEB 05	German (DE) application and patent publication number format changes
<u>NEWS 6</u>	MAR 03	MEDLINE and LMEDLINE reloaded
<u>NEWS 7</u>	MAR 03	MEDLINE file segment of TOXCENTER reloaded
<u>NEWS 8</u>	MAR 03	FRANCEPAT now available on STN
<u>NEWS 9</u>	MAR 29	Pharmaceutical Substances (PS) now available on STN
<u>NEWS 10</u>	MAR 29	WPIFV now available on STN
<u>NEWS 11</u>	MAR 29	No connect hour charges in WPIFV until May 1, 2004
<u>NEWS 12</u>	MAR 29	New monthly current-awareness alert (SDI) frequency in RAPRA

<u>NEWS EXPRESS</u>	MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 13 APRIL 2004
<u>NEWS HOURS</u>	STN Operating Hours Plus Help Desk Availability
<u>NEWS INTER</u>	General Internet Information
<u>NEWS LOGIN</u>	Welcome Banner and News Items
<u>NEWS PHONE</u>	Direct Dial and Telecommunication Network Access to STN
<u>NEWS WWW</u>	CAS World Wide Web Site (general information)

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0.21 0.21
FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 09:48:12 ON 17 APR 2004
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FILE COVERS 1907 - 17 Apr 2004 VOL 140 ISS 17
FILE LAST UPDATED: 16 Apr 2004 (20040416/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s hydrotreat? (p) distillate
 8077 HYDROTREAT?
 39871 DISTILLATE
 14000 DISTILLATES
 48070 DISTILLATE
 (DISTILLATE OR DISTILLATES)
 L1 919 HYDROTREAT? (P) DISTILLATE

=> s aromatic or hydrocarbon
 214025 AROMATIC
 9363 AROMATICS
 218325 AROMATIC
 (AROMATIC OR AROMATICS)
 279182 AROM
 14249 AROMS
 286609 AROM
 (AROM OR AROMS)
 405448 AROMATIC
 (AROMATIC OR AROM)
 306184 HYDROCARBON
 305126 HYDROCARBONS
 470465 HYDROCARBON
 (HYDROCARBON OR HYDROCARBONS)
 L2 758652 AROMATIC OR HYDROCARBON

=> s vapor (P) phase (P) inhibitor
 457272 VAPOR
 68150 VAPORS
 497663 VAPOR
 (VAPOR OR VAPORS)
 1485014 PHASE
 315735 PHASES
 1618967 PHASE
 (PHASE OR PHASES)
 439104 INHIBITOR
 459830 INHIBITORS
 708465 INHIBITOR
 (INHIBITOR OR INHIBITORS)
 L3 611 VAPOR (P) PHASE (P) INHIBITOR

=> s surfactant or emulsifier or surface active
 158103 SURFACTANT
 141852 SURFACTANTS
 200300 SURFACTANT
 (SURFACTANT OR SURFACTANTS)
 29729 EMULSIFIER
 18128 EMULSIFIERS
 37896 EMULSIFIER
 (EMULSIFIER OR EMULSIFIERS)
 1923294 SURFACE
 374304 SURFACES
 2076750 SURFACE
 (SURFACE OR SURFACES)
 820500 ACTIVE
 684 ACTIVES
 820888 ACTIVE
 (ACTIVE OR ACTIVES)
 30322 SURFACE ACTIVE
 (SURFACE(W)ACTIVE)
 L4 249570 SURFACTANT OR EMULSIFIER OR SURFACE ACTIVE

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=> s 11 and 12 and 13 and 14
 L5 1 L1 AND L2 AND L3 AND L4

=> d 15 ti

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

Citing
 References

TI **hydrotreated distillates-amines-surfactants** as additive packages for hydrocarbon fuels

=> d 15 all

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

Full
 Citing
 Text
 References

AN 2002:964703 CAPLUS
 DN 138:41836
 ED Entered STN: 20 Dec 2002
 TI **hydrotreated distillates-amines-surfactants** as additive packages for hydrocarbon fuels
 IN Lack, Lloyd R.
 PA USA
 SO U.S. Pat. Appl. Publ., 3 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM C10L001-10
 NCL 044310000
 CC 51-11 (Fossil Fuels, Derivatives, and Related Products)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002189156	A1	20021219	US 2002-75506	20020213
PRAI	US 2001-288812P	P	20010504		

AB **Hydrocarbon** fuels (e.g., based on propane and LPG) are composed of a 60-76 vol.% of a **hydrocarbon** mixt., 10-16 vol.% of a **hydrotreated distillate**, a **vapor-phase inhibitor** (increasing additive), and an anionic or an ionic **surfactant**. Suitable additives include petroleum-derived amines and **arom. hydrocarbons**. The additives function as combustion improvers.

ST **hydrocarbon** fuel additive **hydrotreated distillate surfactant**; **vapor phase inhibitor** **hydrocarbon** fuel combustion improver; propane fuel additive **hydrotreated distillate** amine; LPG fuel additive **hydrotreated distillate** amine

IT **Surfactants**
 (anionic; **hydrotreated distillates-amines-surfactants** as additive packages for **hydrocarbon** fuels)

IT Fuel additives
 (combustion improvers; **hydrotreated distillates-amines-surfactants** as additive packages for **hydrocarbon** fuels)

IT Petroleum products
 (**distillates**, **hydrotreated**; **hydrotreated distillates-amines-surfactants** as additive packages for **hydrocarbon** fuels)

IT Petroleum products
 (gases, liquefied; **hydrotreated distillates-amines-surfactants** as additive packages for **hydrocarbon** fuels)

IT **Aromatic hydrocarbons**, uses

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RL: MOA (Modifier or additive use); USES (Uses)
 (hydrotreated distillates-amines-
 surfactants as additive packages for hydrocarbon
 fuels)

IT **Surfactants**
 (ionic; hydrotreated distillates-amines-
 surfactants as additive packages for hydrocarbon
 fuels)

IT Amines, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (petroleum-derived; hydrotreated distillates
 -amines-surfactants as additive packages for
 hydrocarbon fuels)

IT 74-98-6, LPG, uses 106-97-8, LPG, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (hydrotreated distillates-amines-
 surfactants as additive packages for hydrocarbon
 fuels)

=> s petroleum (p) amine
 274409 PETROLEUM
 5959 PETROLEUMS
 274776 PETROLEUM
 (PETROLEUM OR PETROLEUMS)
 243949 AMINE
 232951 AMINES
 375118 AMINE
 (AMINE OR AMINES)

L6 3525 PETROLEUM (P) AMINE

=> s 16 and 11
 L7 2 L6 AND L1

=> d 17 1-2 ti

L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

**Citing
References**

TI hydrotreated distillates-amines-surfactants as additive packages for
 hydrocarbon fuels

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

**Citing
References**

TI Behavior of nitrogen compounds during hydrorefining of Khafji atmospheric
 residuum

=> s 16 and fuel
 330802 FUEL
 152588 FUELS
 379049 FUEL
 (FUEL OR FUELS)

L8 339 L6 AND FUEL

=> s 18 and LPG
 3663 LPG
 52 LPGS
 3686 LPG
 (LPG OR LPGS)

L9 6 L8 AND LPG

=> d 19 1-6 all

h ebc g cg b cg

eb

L9 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2002:964703 CAPLUS
 DN 138:41836
 ED Entered STN: 20 Dec 2002
 TI hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon **fuels**
 IN Lack, Lloyd R.
 PA USA
 SO U.S. Pat. Appl. Publ., 3 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM C10L001-10
 NCL 044310000
 CC 51-11 (Fossil Fuels, Derivatives, and Related Products)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002189156	A1	20021219	US 2002-75506	20020213
PRAI	US 2001-288812P	P	20010504		

AB Hydrocarbon **fuels** (e.g., based on propane and **LPG**) are composed of a 60-76 vol.% of a hydrocarbon mixt., 10-16 vol.% of a hydrotreated distillate, a vapor-phase inhibitor (increasing additive), and an anionic or an ionic surfactant. Suitable additives include **petroleum**-derived **amines** and arom. hydrocarbons. The additives function as combustion improvers.

ST hydrocarbon **fuel** additive hydrotreated distillate surfactant; vapor phase inhibitor hydrocarbon **fuel** combustion improver; propane **fuel** additive hydrotreated distillate amine; **LPG fuel** additive hydrotreated distillate amine

IT Surfactants
 (anionic; hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon **fuels**)

IT **Fuel** additives
 (combustion improvers; hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon **fuels**)

IT **Petroleum** products
 (distillates, hydrotreated; hydrotreated distillates-**amines**-surfactants as additive packages for hydrocarbon **fuels**)

IT **Petroleum** products
 (gases, liquefied; hydrotreated distillates-**amines**-surfactants as additive packages for hydrocarbon **fuels**)

IT Aromatic hydrocarbons, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon **fuels**)

IT Surfactants
 (ionic; hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon **fuels**)

IT **Amines**, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (**petroleum**-derived; hydrotreated distillates-**amines**-surfactants as additive packages for hydrocarbon **fuels**)

IT 74-98-6, **LPG**, uses 106-97-8, **LPG**, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon **fuels**)

L9 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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h ebc g cg b cg

eb

AN 2001:265300 CAPLUS
 DN 134:283155
 ED Entered STN: 13 Apr 2001
 TI Removal of carbonyl sulfide and acid gases from hydrocarbon fluids by
 scrubbing with alkanolamines and heterocyclic amines
 IN Wagner, Rupert; Hugo, Randolph; Holst, Thomas S.
 PA BASF A.-G., Germany
 SO PCT Int. Appl., 28 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 IC ICM B01D053-14
 ICS C10L003-10; B01D011-04
 CC 51-11 (Fossil Fuels, Derivatives, and Related Products)
 Section cross-reference(s): 48

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>PI</u>	<u>WO 2001024912</u>	A1	20010412	<u>WO 2000-EP9704</u>	20001004
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	<u>DE 19947845</u>	A1	20010412	<u>DE 1999-19947845</u>	19991005
	<u>EP 1227873</u>	A1	20020807	<u>EP 2000-979483</u>	20001004
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	<u>NO 2002001590</u>	A	20020531	<u>NO 2002-1590</u>	20020404

PRAI DE 1999-19947845 A 19991005
WO 2000-EP9704 W 20001004
 AB A scrubbing method for removal of COS and addnl. acid gases (e.g., CO₂, H₂S, mercaptans, etc.) from a hydrocarbon-contg. stream consists of scrubbing with an aq. soln. (1.5-5 M) of a C₂-12-aliph. alkanolamine and 0.4-1.7 M of a primary or secondary amine activator. The amine activator can be a 5- or 6-membered nitrogen heterocycle, optionally contg. oxygen. Suitable alkanolamines include methyldiethanolamine and triethanolamine; suitable activators include ethanolamine, methylethanolamine, diethanolamine, piperazine, methylpiperazine, and morpholine. The method is suited for scrubbing of natural gas, synthesis gas (esp. prep'd. from heavy oil or residues), **LPG**, or natural gas liqs.
 ST carbonyl sulfide removal alkanolamine scrubbing; hydrogen sulfide removal alkanolamine scrubbing; acid gas removal **fuel** gas scrubbing; **fuel** gas alkanolamine scrubbing; heterocyclic amine alkanolamine **fuel** gas scrubbing

IT Alcohols, uses
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (amino, C₂-12, scrubbing solvents; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT Scrubbing
 (aq.; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT Petroleum products
 RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PREP (Preparation); PROC (Process)
 (gases, liquefied, scrubbing of; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT Heterocyclic compounds

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (nitrogen, five-membered, scrubbing activators; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT Heterocyclic compounds
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (nitrogen, scrubbing activators; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT Heterocyclic compounds
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (nitrogen-oxygen, scrubbing activators; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT Natural gas, preparation
 RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PREP (Preparation); PROC (Process)
 (processing, scrubbing of; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT Thiols (organic), processes
 RL: PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
 (removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT Synthesis gas
 (scrubbing of; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT Natural gas condensates
 RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PREP (Preparation); PROC (Process)
 (scrubbing of; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT Petroleum refining
 (scrubbing, of **fuel** gases; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT Amines, uses
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (secondary, scrubbing activators; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT Amines, uses
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (tertiary, scrubbing activators; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT 124-38-9, Carbon dioxide, processes 463-58-1, Carbonyl sulfide
7783-06-4, Hydrogen sulfide, processes
 RL: PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
 (removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT 109-83-1, Monomethylethanolamine 110-85-0, Piperazine, uses 110-91-8, Morpholine, uses 111-42-2, Diethanolamine, uses 141-43-5, Monoethanolamine, uses 27323-66-6, Piperazine, methyl-
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical

process); PROC (Process); USES (Uses)
 (scrubbing activators; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT 102-71-6, Triethanolamine, uses 105-59-9, Methyldiethanolamine
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (scrubbing solvents; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Appl; US 4336233 A 1982 CAPLUS
 (2) Gerhardt; US 4999031 A 1991 CAPLUS
 (3) Peytavy; US 5348714 A 1994 CAPLUS
 (4) Union Carbide Chemicals & Plastics Technology Corporation; WO 0066249 A 2000 CAPLUS

L9 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

AN 1997:686130 CAPLUS
 DN 127:320568
 ED Entered STN: 30 Oct 1997
 TI Treat LPGs with amines
 AU Nielsen, R. B.; Rogers, J.; Bullin, J. A.; Duewall, K. J.
 CS Fluor Daniel, Inc., Irvine, CA, USA
 SO Hydrocarbon Processing, International Edition (1997), 76(9), 49-50, 53-54, 56, 58-59
 CODEN: IHPRBS; ISSN: 0018-8190
 PB Gulf Publishing
 DT Journal; General Review
 LA English
 CC 51-0 (Fossil Fuels, Derivatives, and Related Products)
 AB A review, with 26 refs., of the fundamental aspects of LPG amine treaters and guidelines, design considerations and alternatives for static mixers, jet eductor mixers and columns with structured packing, random packing and sieve trays. All of these current design methods are compared based on plant operating data.
 ST LPG sweetening amine review
 IT Packing materials (beds)
 Sweetening agents
 (LPG sweetening with amines)
 IT Amines, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (LPG sweetening with amines)
 IT Petroleum products
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (gases, liquefied; LPG sweetening with amines)
 IT Plates
 (sieve; LPG sweetening with amines)
 IT Mixers (processing apparatus)
 (static; LPG sweetening with amines)
 IT Fuel gas manufacturing
 (sweetening in; LPG sweetening with amines)
 IT 105-59-9 111-42-2, Diethanolamine, uses 141-43-5, uses 929-06-6, Diglycolamine
 RL: NUU (Other use, unclassified); USES (Uses)
 (LPG sweetening with amines)
 IT 124-38-9, Carbon dioxide, processes 463-58-1, Carbonyl sulfide 7783-06-4, Hydrogen sulfide, processes
 RL: REM (Removal or disposal); PROC (Process)
 (LPG sweetening with amines)

L9 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1990:518258 CAPLUS
 DN 113:118258
 ED Entered STN: 29 Sep 1990
 TI Removal of organic sulfur compounds from gases
 IN Nakajima, Susumu; Wakitani, Yoshiaki
 PA Kawasaki Steel Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM B01D053-14
 ICS B01D053-34; C10G019-02; C10G053-02
 CC 51-9 (Fossil Fuels, Derivatives, and Related Products)
 Section cross-reference(s): 59

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02014714	A2	19900118	JP 1988-163631	19880630
	JP 07090139	B4	19951004		
PRAI	JP 1988-163631		19880630		

AB A dry-type method for removing org. S compds., esp. COS and CS₂, from coke-oven gas, LPG, blast-furnace gas or flue gases, etc., comprises (a) contacting the feed gas with a 1st adsorbent contg. secondary amines (e.g., diethanolamine or diphenylamine) in a 1st stage to remove most CS₂ and to decomp. the remaining CS, (b) contacting the treated gas with a 2nd adsorbent contg. diglycolamine in a 2nd stage to remove the formed H₂S from the COS decompn., and (c) passing the treated gas through a fixed bed of catalysts contg. Fe oxide in a 3rd stage to completely remove residual H₂S.

ST coke oven gas desulfurization adsorbent; diethanolamine adsorbent carbon disulfide removal; carbonyl sulfide removal flue gas

IT Petroleum gases, liquefied

RL: USES (Uses)
 (org. sulfur compd. removal from, adsorbents contg. secondary amines for)

IT Fuel gases

(coke-oven, org. sulfur compd. removal from, adsorbents contg. secondary amines for)

IT Flue gases

(industrial, org. sulfur compd. removal from, adsorbents contg. secondary amines for)

IT Amines, uses and miscellaneous

RL: USES (Uses)
 (secondary, adsorbents contg., for removing carbon disulfide from coke-oven or flue gases)

IT 111-42-2, uses and miscellaneous

RL: USES (Uses)
 (adsorbent contg., on calcium silicate supports, for removing carbon disulfide from coke-oven or flue gases)

IT 929-06-6

RL: USES (Uses)
 (adsorbent contg., on iron oxide supports, for removing org. sulfur compds. from coke-oven or flue gases)

IT 1332-37-2, Iron oxide, uses and miscellaneous

RL: CAT (Catalyst use); USES (Uses)
 (catalysts contg., for removing hydrogen sulfide, in gas purifn.)

IT 463-58-1, Carbonyl sulfide

RL: RCT (Reactant); RACT (Reactant or reagent)
 (decompn. of, hydrogen sulfide from, removal of, diglycolamine-contg. adsorbent for)

IT 7783-06-4P, Hydrogen sulfide (H₂S), uses and miscellaneous

h ebc g cg b cg

eb

RL: FORM (Formation, nonpreparative); PREP (Preparation)
 (formation of, from carbonyl sulfide decompn., in removal of org.
 sulfur compds. from coke-oven or flue gases)

IT 63143-57-7, Carbon sulfide
 RL: REM (Removal or disposal); PROC (Process)
 (removal of, from coke-oven gas or flue gases, adsorbents for)

L9 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

Full	Citing
Text	References

AN 1982:408769 CAPLUS
 DN 97:8769
 ED Entered STN: 12 May 1984
 TI New low-investment process to recover liquids from refinery **fuel** gas
 being used in Texas
 AU Rowell, Rex L.
 CS PCI Consult. Inc., Houston, TX, USA
 SO Oil & Gas Journal (1982), 80(19), 127-31
 CODEN: OIGJAV; ISSN: 0030-1388
 DT Journal
 LA English
 CC 51-9 (Fossil Fuels, Derivatives, and Related Products)
 AB Hydrocarbon liqs. are recovered and gas streams are sepd. from
 petroleum-cracking and catalytic-reforming off-gases in a multistep
 cryogenic process. **Amine**-scrubbed gases are expanded with partial
 condensation (exit temps. -150° to -200°F and dried. The
 final step is demethanization (or deethanization), in which **LPG** and
 gasoline liqs. are sepd. for further fractionation from C1 and C2
 fractions. The process is further characterized by low capital investment
 and short payout periods. Material balances for various phases of
 operation are also given.
 ST petroleum refinery gas sepn; refinery gas sepn cryogenic; **LPG** cryogenic
 recovery refinery gas; gasoline cryogenic recovery refinery gas
 IT Gasoline
 Petroleum gases, liquefied
 RL: PROC (Process)
 (recovery of, from cracking and catalytic-reforming off-gases,
 cryogenic process for)
 IT Petroleum refining
 (gas-liq. sepn., of cracking and catalytic-reforming off-gases,
 cryogenic process for)
 IT Petrochemicals
 (light olefins, recovery of, from cracking and catalytic-reforming
 off-gases, cryogenic process for)

L9 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

Full	Citing
Text	References

AN 1972:517808 CAPLUS
 DN 77:117808
 ED Entered STN: 12 May 1984
 TI Control of vehicular air pollution through modifications to conventional
 power plants and their **fuels**
 AU Quick, Stephen L.; Kittredge, George D.
 CS Natl. Air Pollut. Control Adm., Ann Arbor, MI, USA
 SO Proc. Int. Clean Air Congr., 2nd (1971), Meeting Date 1970, 631-9.
 Editor(s): Englund, H. M. Publisher: Academic, New York, N. Y.
 CODEN: 25JQAO
 DT Conference
 LA English
 CC 59-2 (Air Pollution and Industrial Hygiene)
 Section cross-reference(s): 51, 67
 AB Investigations carried out by the Natl. Air Pollution Control Adm. (NAPCA)
 are reviewed. Two control techniques are considered, viz., those based on

(1) engine modification and (2) **fuel** modification. The former approach includes removal of gaseous pollutant emissions from the exhaust system, provides induction system improvement designed to permit better atomization, and removal of particulates from the exhaust stream. Fe-base alloys and a nonmetallic reactor development program are expected to yield economical high-temp. reactors. Catalytic control devices esp. for N oxides are studied with rare earth metal oxides as the significant catalysts. Atomization devices producing 10-20- μ droplets are most promising in achieving improved distribution of the **fuel-air** mixt. A spinning disk atomizer operating at 45,000 rpm produces 20- μ droplets with a 2-in. diam. disk. The high speed is achieved with either an elec. motor or an air turbine. Alternate **fuels** for emission control include liquefied **petroleum** gas (**LPG**), liquefied and compressed natural gas (**LNG** and **CNG**), alcs., ethers, **NH3**, **amines**, and hydrazines. **LNG** and **CNG** are advantageous owing to the clean burning characteristics of gaseous **fuels**, NAPCA does not recommend dual **fuel** systems. Other promising **fuels** are **MeOH** and **H**.

ST vehicular air pollution control; catalyst vehicular air pollution; **petroleum** gas vehicular **fuel**; natural gas vehicular **fuel**; alc vehicular **fuel**; ether vehicular **fuel**; ammonia vehicular **fuel**; amine vehicular **fuel**; hydrazine vehicular **fuel**; methanol vehicular **fuel**; hydrogen vehicular **fuel**

IT **Fuels**

(air pollution control in relation to vehicular)

IT **Engines**

(design of, air pollution in relation to)

IT **Exhaust gases**

(treatment of)

=> d his

(FILE 'HOME' ENTERED AT 09:47:31 ON 17 APR 2004)

FILE 'CAPLUS' ENTERED AT 09:48:12 ON 17 APR 2004

L1 919 S HYDROTREAT? (P) DISTILLATE
 L2 758652 S AROMATIC OR HYDROCARBON
 L3 611 S VAPOR (P) PHASE (P) INHIBITOR
 L4 249570 S SURFACTANT OR EMULSIFIER OR SURFACE ACTIVE
 L5 1 S L1 AND L2 AND L3 AND L4
 L6 3525 S PETROLEUM (P) AMINE
 L7 2 S L6 AND L1
 L8 339 S L6 AND FUEL
 L9 6 S L8 AND LPG

=> s 11 and 16

L10 2 L1 AND L6

=> s 16 and 13

L11 3 L6 AND L3

=> d 111 1-3 ti

L11 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

Citing References

TI hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon fuels

L11 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

Citing References

TI Organic nitrogen compounds as corrosion inhibitors for crude oil processing

h ebc g cg b cg

eb

L11 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

Citing
 References

TI Organic coatings with a **vapor-phase** corrosion **inhibitor**

=> d 111 2 3 all

L11 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text
 Citing References

AN 1969:13219 CAPLUS
 DN 70:13219
 ED Entered STN: 12 May 1984
 TI Organic nitrogen compounds as corrosion inhibitors for crude oil
 processing
 AU Wingerter, K. H.; Becker, F. J.
 CS Komb. "Otto Grotewohl", Boehlen, Ger. Dem. Rep.
 SO Conf. Chem. Chem. Process. Petrol. Natur. Gas, Plenary Lect., Budapest
 (1968), Meeting Date 1965, 959-66. Editor(s): Freund, Michael. Publisher:
 Akad. Kiado, Budapest, Hung.
 CODEN: 20GJAN
 DT Conference
 LA German
 CC 51 (Petroleum, Petroleum Derivatives, and Related Products)
 AB A discussion was presented of the protection by N-contg. **inhibitors** of
 overhead **petroleum** distn. equipment against corrosion by chlorides,
 naphthenic acids, and S compds. Com. **inhibitors** such as Conrad R,
 Kontol, Nalco 161 AC, and synthesized compds. such as alkylamines, fatty
amines, ethanolamine, ethylenediamine, morpholine, trialkyltriazines,
 alkylimidazolines, dicyclohexylamine, pyridine, quinoline, and aromatic
amines, were tested in liq. (oil and water) and **vapor phase** by
 static and dynamic tests. The effect of HCl and H₂S at different temps.
 on metal strips was detd. C14-18 fatty **amines** offered the best results
 (~65% redn.).
 ST corrosion inhibitors **petroleum**; fatty **amines** corrosion inhibitors
 IT **Amines**, uses and miscellaneous
 RL: USES (Uses)
 (as corrosion inhibitors in **petroleum** refining)
 IT Petroleum refining
 (corrosion inhibitors for, nitrogen compds. as)
 IT Nitrogen
 RL: USES (Uses)
 (as corrosion inhibitors in petroleum refining)

L11 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text
 Citing References

AN 1952:56012 CAPLUS
 DN 46:56012
 OREF 46:9324f-h
 ED Entered STN: 22 Apr 2001
 TI Organic coatings with a **vapor-phase** corrosion **inhibitor**
 IN Wachter, Aaron; Stillman, Nathan
 PA Shell Development Co.
 DT Patent
 LA Unavailable
 CC 26 (Paints, Varnishes, and Lacquers)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI US 2596450		19520513	US	
AB	Strippable and nonstrippable, mainly transparent, org. coatings are			

inhibited against the corrosion of ferrous and nonferrous metals with N-base nitrite salt **vapor-phase** corrosion **inhibitors**. Only dicycloalkyl **amine** nitrites are claimed, dicyclohexylamine nitrite in particular, by using 2-20 parts by wt. of **inhibitor** to 100 parts by wt. of coating material. The possible use of many more similar compds. is mentioned in which the nitrite salt of a primary, secondary, or tertiary **amine** is formed. Derivs. of quaternary ammonium bases including pyridinium bases are also given. The importance of a pH not lower than 6 in the inhibited coating is emphasized. The base coatings are mainly alkyl resin or ethylcellulose coats, but the possible use of others, such as waxes, lacquers, paint bases with and without pigments, and asphalt emulsions, is also mentioned. The use of solvents, such as EtOH, amyl acetate, benzene, and **petroleum** naphtha, is given in the examples.

IT Nitrates
(corrosion-inhibiting org.)

IT Coating(s)
(corrosion-preventing or -resistant, from alkyd resins or ethylcellulose, contg. dicycloalkyl amine nitrites or quaternary ammonium bases as inhibitors)

IT Amines
(nitrites, corrosion inhibitors from)

IT Corrosion
(prevention of, dicycloalkyl amine nitrites and derivs. of quaternary ammonium bases for)

IT Piperidine, 2,2,6,6-tetramethyl-, nitrite
(corrosion inhibition by)

IT 9004-57-3, Cellulose, ethyl ether
(coatings from, contg. dicycloalkyl amine and quaternary ammonium compds. as corrosion inhibitors)

IT 14798-03-9, Ammonium
(compds., substituted, coatings contg. vapor-phase corrosion-inhibiting)

IT 3129-91-7, Dicyclohexylamine, nitrite
(corrosion-prevention compns. contg.)

=> file stnguide

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	60.10	60.31
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-6.24	-6.24

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CA SUBSCRIBER PRICE	0.00	-6.24

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FILE LAST UPDATED: 16 Apr 2004 (20040416/ED)

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